

**METHOD AND APPARATUS FOR IMPLEMENTING REDUNDANCY  
ENHANCED DIFFERENTIAL SIGNAL INTERFACE**

**Abstract of the Disclosure**

5           A method and apparatus are provided for implementing a redundancy  
enhanced differential signal interface. A differential signaling I/O pair is  
coupled to a differential receiver interface. The differential receiver interface  
includes a pair of multiplexers coupled to a differential receiver. An error  
detecting mechanism is coupled to the differential receiver for detecting an  
error. When an error is detected, an interface operating speed is reduced.  
10   True and complement sides of a differential signaling I/O pair are alternately  
tested by first enabling a multiplexer control of one of the multiplexers,  
reading data, and checking for the error; then enabling a multiplexer control  
of the other multiplexer, reading data, and checking for the error.  
Responsive to detecting a failure of a true side or a complement side, the  
15   detected failed true side or complement side is set to a reference voltage  
and the reduced interface operating speed is maintained for continued  
operation.